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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.              | CONFIRMATION NO. |
|--|-------------|----------------------|----------------------------------|------------------|
| 10/783,599   | 02/20/2004  | Umesh Madan          | MSI-1824US                       | 1559             |
| 22801 7590 01/02/2007<br>LEE & HAYES PLLC<br>421 W RIVERSIDE AVENUE SUITE 500<br>SPOKANE, WA 99201 |             |                      | EXAMINER<br>AHLUWALIA, NAVNEET K |                  |
|  |             |                      | ART UNIT<br>2166                 | PAPER NUMBER     |

| SHORTENED STATUTORY PERIOD OF RESPONSE | NOTIFICATION DATE | DELIVERY MODE |
|--|-------------------|---------------|
| 3 MONTHS                               | 01/02/2007        | ELECTRONIC    |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 01/02/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

lhptoms@leehayes.com

|                              |   |                                     |  |
|------------------------------|---|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/783,599    | <b>Applicant(s)</b><br>MADAN ET AL. |  |
|                              | <b>Examiner</b><br>Navneet K. Ahluwalia | <b>Art Unit</b><br>2166             |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 October 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-27 and 35-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-27 and 35-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The application has been examined. Claims 18 – 27 and 35 – 42 are pending in this office action.

### ***Election/Restrictions***

2. Applicant's election with traverse of Group III in the reply filed on October 30, 2006 is acknowledged. The traversal is on the ground(s) that "the independent or distinct as claimed" as stated in the response to election/restriction page 1.

3. This is not found persuasive because

I. Claims 1 – 10 are drawn to evaluating queries and searching, classified in class 707, subclass 3.

II. Claims 11 – 17, 28 – 34 are drawn to mapping, filtering and optimizing, classified in class 707, subclass 2.

III. Claims 18 – 27, 35 – 42 are drawn towards manipulation of data structure, classified in class 707, subclass 101.

The inventions are distinct, each from the other because of the following reasons:

Inventions in group I and group II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention in group I has separate utility such as evaluating queries and searching,. The invention in group II has separate utility such as mapping, filtering and optimizing. See MPEP § 806.05(d).

Inventions in group I and group III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention in group I has separate utility such as evaluating queries and searching. The invention in group III has separate utility such as manipulation of data structure. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purpose as indicated is proper.

The requirement is still deemed proper and is therefore made FINAL.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 18 – 27 and 35 – 42 are rejected under 35 U.S.C. 102(e) as being anticipated by Hejlsberg et al. ('Hejlsberg' herein after) (US 2003/0167277 A1)

The applied reference has a common assignee with the instant application.  
Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art

under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

With respect to claim 18,

Hejlsberg discloses one or more computer-readable media comprising computer-executable instructions that, when executed on a computer, perform the following steps: creating an object model that maps object properties to an object template that conforms to a query protocol, wherein the object conforms to an object protocol that is different than the query protocol (paragraph 0032, Hejlsberg); identifying a query value (paragraph 0069, Hejlsberg); referencing the object template to locate an object property corresponding to the query value (paragraph 0070, Hejlsberg) identifying a property value assigned to the object property and evaluating the property value against the query value to determine if the query is satisfied by the property value (paragraphs 0118 and 0146, Hejlsberg).

With respect to claim 19,

Hejlsberg discloses the one or more computer-readable media as recited in claim 18, wherein the object properties are mapped to the object template and the property value is evaluated against the query without, serializing object data (paragraphs 0052,

0066, Hejlsberg).

With respect to claim 20,

Hejlsberg discloses the one or more computer-readable media as recited in claim 18, wherein the query protocol is extensible Markup Language (XML) (paragraphs 0020 - 0021, Hejlsberg) and the object protocol is Common Language Runtime (CLR) (paragraph 0026, Hejlsberg).

With respect to claim 21,

Hejlsberg discloses the one or more computer-readable media as recited in claim 18, wherein the object model is an infoset model that corresponds to the object (paragraphs 0118 and 0224, Hejlsberg).

With respect to claim 22,

Hejlsberg discloses the one or more computer-readable media as recited in claim 18, wherein the creating an object model further comprises creating only a portion of the object model that is necessary to discover the object property tested by the query (paragraphs 0052, 0066, Hejlsberg).

With respect to claim 23,

Hejlsberg discloses the one or more computer-readable media as recited in claim 18, further comprising storing the object model so that it can be retrieved for future

query evaluations against the object to avoid having to re-create the object model (paragraphs 0052 and 0070, Hejlsberg).

With respect to claim 24,

Hejlsberg discloses the one or more computer-readable media as recited in claim 18, wherein the creating an object model further comprises retrieving a partially completed version of an object model and augmenting the object model to an extent necessary to locate the object property that corresponds to the query value (paragraphs 0118 and 0146, Hejlsberg).

With respect to claim 25,

Hejlsberg discloses the one or more computer-readable media as recited in claim 18, further comprising: generating one or more opcodes to perform the referencing step, the identifying a property value step and the evaluating step (paragraph 0056, Hejlsberg); storing the one or more opcodes in memory (paragraph 0074, Hejlsberg); and wherein the opcodes can be retrieved and utilized to perform similar steps in a subsequent query evaluation involving the object (paragraph 00612, Hejlsberg).

With respect to claim 26,

Hejlsberg discloses the one or more computer-readable media as recited in claim 25, wherein the opcodes can be compiled and executed dynamically at runtime (paragraph 030, Hejlsberg).

With respect to claim 27,

Hejlsberg discloses the one or more computer-readable media as recited in claim 18, wherein the query further comprises an XPath filter (paragraph 0052, Hejlsberg).

With respect to claim 35,

Hejlsberg discloses a method, comprising: mapping object properties to template elements identifying a query value in a query against which the object is to be evaluated (paragraph 0032, Hejlsberg); referencing the template to identify an element corresponding to the query value (paragraph 0069, Hejlsberg); identifying an object property value corresponding to the identified template element comparing the object property value to the query value to evaluate at least a portion of the query (paragraph 0070, Hejlsberg); and wherein the object is derived from an object language, the query is derived from a query language, and the steps are accomplished without serializing data included with or referenced by the object (paragraphs 0118 and 0146, Hejlsberg).

With respect to claim 36,

Hejlsberg discloses the method as recited in claim 35, wherein the object language further comprises a Common Language Runtime (CLR) language (paragraph 0026, Hejlsberg).

With respect to claim 37,



Hejlsberg discloses the method as recited in claim 35, wherein the query language further comprises extensible Markup Language (XML) (paragraphs 0020 - 0021, Hejlsberg).

With respect to claim 38,

Hejlsberg discloses the method as recited in claim 35, wherein the query language is Xpath (paragraph 0052, Hejlsberg).

With respect to claim 39,

Hejlsberg discloses the method as recited in claim 35, further comprising using an object infocet model that references object properties to map the object properties to template elements (paragraphs 0118 and 0224, Hejlsberg).

With respect to claim 40,

Hejlsberg discloses the method as recited in claim 39, further comprising building the infocet model at least to the extent necessary to identify the correct object property value (paragraphs 0052, 0066, Hejlsberg).

With respect to claim 41,

Hejlsberg discloses the method as recited in claim 39, further comprising retrieving the infocet model from memory (paragraphs 0118 and 0224, Hejlsberg).

Art Unit: 2166

With respect to claim 42,

Hejlsberg discloses the method as recited in claim 39, further comprising:  
retrieving a partial infoaset model from memory (paragraphs 0052 and 0070, Hejlsberg);  
and if the object property value cannot be identified from the partial infoaset, augmenting  
the infoaset model at least to the extent necessary to identify the correct object property  
value (paragraphs 0118 and 0146, Hejlsberg).

**Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Navneet K. Ahluwalia whose telephone number is 571-272-5636. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam T. Hosain can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Navneet*  
Navneet K. Ahluwalia  
Examiner  
Art Unit 2166

Dated: 12/25/2006

*TM*  
*12/26/06*

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MOHAMMAD ALI  
PRIMARY EXAMINER